What is Claimed Is:

1. A satellite terminal for providing data communications with a satellite, comprising:

communications circuitry for providing signal transmission to the satellite at a selected data rate, and

a data rate change request mechanism responsive to a satellite signal independent of the signal transmission from the communications circuitry for requesting the communications circuitry to reduce the selected data rate in response to a first value of a parameter of the satellite signal.

2. The satellite terminal of claim 1, wherein the data rate change request mechanism requests the communications circuitry to return to the selected data rate in response to a second value of the satellite signal parameter.

3. The satellite terminal of claim 1, wherein the data rate change request mechanism is further responsive to feedback signals produced by the satellite in response to the signal transmission from the communications circuit.

4. The satellite terminal of claim 3, wherein the data rate change request mechanism is configured to request the communications circuitry to reduce the selected data rate when the feedback signals indicate an increase in signal fade.

5. The satellite terminal of claim 2, wherein the data rate change request mechanism is configured to request the communications circuitry to reduce the selected data rate when a signal-to-noise ratio (SNR) value of the satellite signal is less than a first predetermined SNR value.

6. The satellite terminal of claim 5, wherein the data rate change request mechanism is configured to request the communications circuitry to return to the selected data rate when the SNR value of the satellite signal exceeds a second predetermined SNR value.

7. The satellite terminal of claim 6, wherein the first and second SNR values are set with respect to a reference SNR value.

8. The satellite terminal of claim 7, wherein the reference SNR value represents a measured SNR of the satellite signal averaged over a long period of time.

9. The satellite terminal of claim 8, wherein the SNR value of the satellite signal represents the measured SNR of the satellite signal averaged over a short period of time.

10. The satellite terminal of claim 4, further comprising an encoder for providing error-correcting coding of a signal transmitted to the satellite.

11. The satellite terminal of claim 10, wherein each of the feedback signals indicates whether the encoded signal passes or fails a decoding procedure at the satellite.

12. The satellite terminal of claim 11, wherein the data rate change request mechanism is configured to request the communications circuitry to reduce the selected data rate when a first predetermined number of feedback signals indicates that the encoded signal fails the decoding procedure.

13. The satellite terminal of claim 12, wherein the first predetermined number of feedback signals is detected among a second predetermined number of consecutive feedback signals.

14. The satellite terminal of claim 12, wherein the transmitted signal is encoded using a Reed-Solomon (RS) code.

15. A satellite communications system comprising:

a data communications device for transmitting uplink signals to a satellite at a selected data rate, and having a fallback mode of operation, during which the uplink signals are transmitted at a data rate reduced compared to the selected data rate; and

a fallback mode ingress/egress mechanism responsive to a satellite beacon signal independent of the uplink signals and to feedback signals produced by the satellite in response to the uplink signals, for requesting the data communications device to switch into the fallback mode when either the feedback signals indicate an increase in signal fade or in response to a first value of a parameter of the satellite beacon signal.

16. The satellite communications system of claim 15, wherein the fallback mode ingress/egress mechanism is configured to request the data communications device to switch out of the fallback mode in response to a second value of the satellite beacon signal parameter.

17. The satellite communications system of claim 15, wherein the fallback mode ingress/egress mechanism is configured to request the data communications device to switch into the fallback mode in response to a predetermined number of RS failures indicated by the feedback signals.

18. The satellite communications system of claim 15, wherein the predetermined number of RS failures is detected within an observation window covering a preset number of the feedback signals.

19. The satellite communications system of claim 16, wherein the fallback mode ingress/egress mechanism is configured to request the data communications device to switch into

the fallback mode when an SNR value of the satellite beacon signal is less than a difference between a reference SNR value and a first threshold SNR value.

20. The satellite communications system of claim 19, wherein the fallback mode ingress/egress mechanism is configured to request the data communications device to switch out of the fallback mode when an SNR value of the satellite beacon signal exceeds a difference between the reference SNR value and a second threshold SNR value smaller than the first SNR threshold value.

21. A method of operating a satellite terminal interacting with a satellite, comprising the steps of:

transmitting an uplink signal at a selected data rate,

receiving a satellite signal transmitted by the satellite independently of the uplink signal, and

initiating reduction of the selected data rate in response to a first value of a parameter of the satellite signal.

22. The method of claim 21, further comprising the step of initiating reduction of the selected data rate when feedback signals produced by the satellite in response to the up-link signal transmission indicate an increase in signal attenuation.

23. The method of claim 22, further comprising the step of initiating return to the uplink signal transmission at the selected data rate in response to a second value of a parameter of the satellite signal.

24. The method of claim 23, wherein the parameter of the satellite signal represents an SNR.

25. The method of claim 24, wherein the reduction of the selected data rate is initiated when an SNR value of the satellite signal is less than a difference between a reference SNR value and a first threshold SNR value.

26. The method of claim 25, wherein the return to the selected data rate is initiated when the SNR value of the satellite signal exceeds a difference between the reference SNR value and a second threshold SNR value smaller than the first SNR threshold value.

27. The method of claim 26, wherein the reference SNR value is determined by averaging a measured SNR of the satellite signal over a long period of time.

28. The method of claim 27, wherein the SNR value of the satellite signal is determined by averaging the measured SNR of the satellite signal over a short period of time.

29. The method of claim 28, wherein the first and second threshold SNR values depend on maximum transmit power.

30. The method of claim 22, further comprising the step of encoding transmitted uplink signals using an error-correction code.

31. The method of claim 30, wherein each of the feedback signals indicates whether an encoded uplink signal passes or fails a decoding procedure at the satellite.

32. The satellite terminal of claim 31, wherein the reduction of the selected data rate is initiated when a first predetermined number of feedback signals indicate that the encoded uplink signal fails the decoding procedure.

33. The satellite terminal of claim 32, wherein the first predetermined number of feedback signals is detected within an observation window including a second predetermined number of consecutive feedback signals.

34. The satellite terminal of claim 32, wherein the transmitted uplink signals are encoded using a Reed-Solomon code.

35. A method of changing an uplink data rate in a satellite communications system, comprising the steps of:

receiving feedback signals produced in response to encoded uplink signals,

receiving satellite signals independent of the uplink signals,

detecting a number of failed feedback signals indicating that the encoded uplink signals fail a decoding procedure,

if the number of failed feedback signals exceeds a predetermined number, initiating reduction of the uplink data rate,

if the number of failed feedback signal does not exceed the predetermined number, detecting a SNR value of the satellite signal,

initiating reduction of the uplink data rate when the SNR value of the satellite signal is less than the first predetermined level.

36. The method of claim 35, further comprising the step of initiating increase of the reduced uplink data rate when the SNR value of the satellite signal exceeds a second predetermined level.

37. The method of claim 35, wherein the uplink signals are encoded using a Reed-Solomon code.